



Please type a plus sign (+) inside this box ☐ +

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of info unless it contains a valid OMB control no.

<b>Substitute for form 1449A/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/735,474
				Filing Date	December 12, 2003
				First Named Inventor	Eric C. Leuthardt
				Group Art Unit	3736
				Examiner Name	
Sheet	1	of	4	Attorney Docket Number	60005161-0061

U.S. PATENT DOCUMENTS						
Examiner Initials*	CiteNo. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
<i>PL</i>	1	4,735,208		Wyler et al.	05-05-1988	
	2	5,638,826		Wolpaw et al.,	06-17-1997	
	3	6,091,979		Madsen	07-18-2000	
	4	6,304,775		Iasemidis	08-28-1990	
	5	6,349,231		Musha	02-19-2002	
<i>✓</i>	6	6,591,138		Fischell	07-08-2003	
<i>PL</i>	7	6,597,954		Pless	07-22-2003	
Examiner Signature	<i>Patricia - upall</i>				Date Considered	<i>12/21/05</i>

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Copied from 10736747 on 09/01/2005

Please type a plus sign (+) inside this box ☐

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of info unless it contains a valid OMB control no.

Substitute for form 1449B/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	10/736,474
		Filing Date	December 12, 2003
		First Named Inventor	Eric C. Leuthardt
		Group Art Unit	3736
		Examiner Name	
Sheet <u>2</u> of 4	Attorney Docket Number	60005161-0061	
<b>OTHER ITEMS – NON PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials*	CiteNo. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	8	BABILONI et al., "Linear Classification of Low-Resolution EEG Patterns Produced by Imagined Hand Movements," IEEE Trans. Rehabil. Eng., 2000, pp. 186-187, Vol. 8.	
	9	BARINAGA, "Remaping the Motor Cortex," Science, 1995, pp. 1696-1698, Vol. 268.	
	10	BAYLISS et al., A Virtual Reality Testbed for Brain-Computer Interface Research, "IEEE Trans. Rehabil. Eng., 2000, pp. 188-189, Vol. 8.	
	11	BIRBAUMER et al., The Thought Translation Device (TTD) for Completely Paralyzed Patients, "IEEE Trans. Rehabil. Eng., 2000, pp. 190-197, Vol. 8.	
	12	BIRCH et al., "Brain-Computer Interface Research at the Neil Squire Foundation," IEEE Trans. Rehabil. Eng., 2000, pp. 193-197, Vol. 8.	
	13	CRONE et al., Induced Electrographic Gamma Activity During Auditory Perception," Clin. Neurophysiol., 2001, 112: 565-582, Vol. 112.	
	14	CURRAN et al., "Learning to Control Brain Activity: A Review of the Production and Control of EEG Components for Driving Brain-Computer Interface (BCI) Systems," Brain and Cognition, 2003, pp. 326-336, Vol. 51.	
	15	DONCHIN et al., "The Mental Prosthesis: Assessing the Speed of a P300-Based Brain-Computer Interface," IEEE Trans. Rehabil. Eng., 2000, pp. 174-179, Vol. 8.	
	16	FREEMAN et al., "Spatial Spectra of Scalp EEG and EMG from Awake Humans," Clinical Neurophysiology, 2003, pp. 1-16.	
	17	GRAFFIN et al., "EEG Concomitants of Hypnosis and Hypnotic Susceptibility," J. Abnormal Physio., 1995, pp. 123-131, Vol. 104.	
✓	18	GRAIMANN et al., "Visualization of Significant ERD/ERS Patterns in Multichannel EEG and ECoG Data," Clin. Neurophys., 2002, pp. 43-47, Vol. 113.	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Copied from 10736747 on 09/01/2005

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/736,474
				Filing Date	December 12, 2003
				First Named Inventor	Eric C. Leuthardt
				Group Art Unit	3736
Sheet	3	of	4	Examiner Name	
				Attorney Docket Number	60005161-0061
<b>OTHER ITEMS – NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials*	CiteNo.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
✓	19	ISAACS et al., "Work Toward Real-Time Control of a Cortical Neural Prothesis," IEEE Trans. Rehabil. Eng., 2000, pp. 196-213, Vol. 8.			
	20	KENNEDY et al., "Direct Control of a Computer from the Human Central Nervous System," IEEE Trans. Rehabil. Eng., 2000, pp. 198-202, Vol. 8.			
	21	KENNEDY et al., Restoration of Neural Output from a Paralyzed Patient by a Direct Brain Connection," Neuroreport, 1998, pp. 1707-1711, Vol. 9.			
	22	KOSTOV et al., "Parallel Man-Machine Training in Development of EEG-Based Cursor Control," IEEE Trans. Rehabil. Eng., 2000, pp. 203-205, Vol. 8.			
	23	LAUER et al., "Applications of Cortical Signals to Neuroprosthetic Control: A Critical Review," IEEE Trans. Rehabil. Eng., 2000, pp. 205-207, Vol. 8.			
	24	LEE et al., "Cortical Potentials Related to Voluntary and Passive Finger Movements Recorded from Subdural Electrodes in Humans," Ann. Neurol., 1986, pp. 32-37, Vol. 20.			
	25	LEVINE et al., "A Direct Brain Interface Based on Event-Related Potentials," IEEE Trans. Rehabil. Eng., 2000, pp. 180-185, Vol. 8.			
	26	LEVINE et al., "Preliminary Work on a Direct Brain Interface for Control of Assistive Technologies," downloaded from <a href="http://www.engin.umich.edu/dbi/nih2000/concept.html">http://www.engin.umich.edu/dbi/nih2000/concept.html</a> .			
	27	MAKEIG et al., "A Natural Basis for Efficient Brain-Actuated Control," IEEE Trans. Rehabil. Eng., 2000, pp. 208-210, Vol. 8.			
	28	MIDDENDORF et al. "Brain-Computer Interfaces Based on the Steady-State Visual-Evoked Response," IEEE Trans. Rehabil. Eng., 2000, pp. 211-214, Vol. 8.			
	29	MINER et al., "Answering Questions with an Electroencephalogram-Based Brain-Computer Interface," Arch. Phys. Med. Rehabil., 1998, pp. 1029-1033, Vol. 79.			
	30	ONOFRIJ et al., "Even Related Potentials Recorded in Patients with Locked-In Syndrome," J. Neurol. Neurosurg., 1997 (6 pages).			
	31	PERELMOUTER et al., "A Binary Spelling Interface with Random Errors," IEEE Trans. Rehabil. Eng., 2000, pp. 227-232, Vol. 8.			
✓	32	PFURTSCHELLER, et al., "Frequency Dependence of the Transmission of the EEG from Cortex to Scalp," Electroencephalogr. Clin. Neurophysiol., 1975, pp. 93-96, Vol. 38.			

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete If Known</b>	
				Application Number	10/736,474
				Filing Date	December 12, 2003
				First Named Inventor	Eric C. Leuthardt
				Group Art Unit	3736
Sheet	4	of	4	Examiner Name	
				Attorney Docket Number	60005161-0061
<b>OTHER ITEMS – NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials*	CiteNo.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
CP	33	PFURTSCHELLER et al., "Spatiotemporal Patterns of Beta Desynchronization and Gamma Synchronization in Corticographic Data During Self-Paced Movement, "Clin. Neurophysiol., 2003, pp. 1226-1236, Vol. 114.			
	34	PFURTSCHELLER et al., "Event-Related EEG/MEG Synchronization and Desynchronization: Basic Principles, "Clin. Neurophysiol., 1999, pp. 1842-1857, Vol. 110.			
	35	PFURTSCHELLER et al., "Current Trends in Graz Brain-Computer Interface (BCI) Research, "IEEE Trans. Rehabil. Eng., 2000, pp. 216-219, Vol. 8.			
	36	SCHALK et al., "BCI2000: A General Purpose Brain Computer Interface (BCI) System for Research and Development," IEEE Trans. Biomed. Eng., 2003, pp. 1-10, Vol. 10.			
	37	SERRUYA et al., "Instant Neural Control of a Movement Signal," Nature, 2002, pp. 141-142, Vol. 416.			
	38	TAYLOR et al., "Direct Cortical Control of 3D Neuroprosthetic Devices," Science, 2002, pp. 1829-1832, Vol. 296.			
	39	WESSBERG et al., "Real-Time Prediction of Hand Trajectory by Ensembles of Cortical Neurons in Primates," Nature, 2000, pp. 361-365, Vol. 408.			
	40	WOLPAW et al., "Brain-Computer Interface Research at the Wadsworth Center," IEEE Trans. Rehabil. Eng., 2000, pp. 222-226, Vol. 8.			
✓	41	WOLPAW et al., "Brain-Computer Interface Technology: A Review of the First International Meeting," IEEE Trans. Rehabil. Eng., 2000, pp. 164-173, Vol. 8.			
Examiner Signature	<i>Stephen C. Miller</i>			Date Considered	12/22/05